

REMARKS

Favorable reconsideration and allowance of the subject application are respectfully requested in view of the following remarks.

Summary of the Office Action

Claims 1-9 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

Claims 1 and 8 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Nishikawa et al.* (U.S. Patent No. 5,859,491).

Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Nishikawa et al.* in view of *Knapp* (U.S. Patent No. 5,677,250).

Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Nishikawa et al.* in view of *Suzuki et al.* (U.S. Patent No. 6,492,289).

Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Nishikawa et al.* in view of *Sugimoto* (U.S. Patent No. 6,407,487).

Claim 9 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Nishikawa et al.* in view of *Tsuzuki et al.* (U.S. Patent No. 5,922,444).

Claims 3-5 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Summary of the Response to the Office Action

Applicants have canceled claim 1 without prejudice or disclaimer, rewritten claim 3 in independent form, and amended claims 2 and 6-9 by this amendment. Also, claims 10 and 11 have been newly added. Accordingly, claims 2-11 are currently pending.

The Disposition of the Claims

Applicants appreciate the Examiner's indication that claims 3-5 would be allowable if

rewritten in independent form as noted on page 6 of the Office Action. Accordingly, Applicants have rewritten claim 3 in independent form including all the limitations of the base claim with minor changes to address the rejection under 35 U.S.C. §112, second paragraph but without altering the intended scope of the originally filed claim 3. Hence, it is respectfully submitted that claims 3-5 are now in condition for allowance.

In addition, Applicants have canceled claim 1 without prejudice or disclaimer, and amended claims 2 and 6-9 to depend from claim 3. Thus, Applicants respectfully submit that claims 2 and 6-9, as amended, are allowable over the prior art of record at least because of their dependence upon claim 3, which has been indicated as containing allowable subject matter. Accordingly, it is respectfully submitted that claims 2 and 6-9 are also in condition for allowance.

Moreover, while Applicants agree that these claims are allowable and patentably distinguish over the prior art, Applicants respectfully do not acquiesce that patentability resides only in the features expressed in page 6 of the Office Action, nor that each and every feature recited in the claims is required for patentability.

Claim Rejection Under 35 U.S.C. §112, Second Paragraph

Claims 1-9 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Specifically, the Office Action appears to assert that statements such as “15-60 mol% of a Si component in terms of SiO₂,” as recited at claim 2, lines 2-3 are unclear. Applicants have amended the claims in view of the Examiner’s helpful comments. Thus, Applicants respectfully submit that claims 2-9, as amended, fully comply with the requirements of 35 U.S.C. § 112, second paragraph.

New Claims 10-11

Applicants have added new claims 10 and 11 to differently define the invention. Applicants respectfully submit that claim 10 is supported by, for example, the discussion at page 22, lines 20-22 of the specification, and that claim 11 is supported by, for example, the discussion at page 34 of the specification. Applicants respectfully submit that claims 10 and 11 are allowable.

Conclusion

In view of the foregoing, withdrawal of the rejections and allowance of the pending claims are earnestly solicited. Should there remain any questions or comments regarding this response or the application in general, the Examiner is urged to contact the undersigned at the number listed below.

Attached hereto is a marked-up version of the changes made by the current amendment. The attachment is captioned "Version with markings to show changes made."

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,
MORGAN, LEWIS & BOCKIUS LLP

By: 

Victoria D. Hao

Registration No. 47,630

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Customer No.: 009629

MORGAN, LEWIS & BOCKIUS LLP

1111 Pennsylvania Avenue, N.W.

Washington, D.C. 20004

Telephone: 202.739.3000

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claim 1 has been canceled without prejudice or disclaimer.

Claims 2, 3 and 6-9 have been amended as follows.

2. (Amended) The spark plug as set forth in claim [1] 3, wherein the glaze layer contains:

15 to 60 mol% of [a Si component in terms of] SiO_2 ;

22 to 50 mol% of [a B component in terms of] B_2O_3 ;

10 to 30 mol% of [a Zn component in terms of] ZnO ;

0.5 to 35 mol% in total of at least one of [Ba and Sr components in terms of] BaO and SrO [, respectively];

1 mol% or less of [an] F [component];

0.1 to 5 mol% of [an Al component in terms of] Al_2O_3 ; and

1.1 to 10 mol% in total of at least one [alkaline metal components of Na, K and Li, in terms] of Na_2O , K_2O and Li_2O , [respectively,] wherein Li is essential, and the content of [the Li component] Li_2O is 1.1 to 6 mol% [in terms of Li_2O].

3. (Amended) A spark plug comprising:

a center electrode;

a metal shell;

an insulator comprising alumina ceramic and disposed between the center electrode and the metal shell,

wherein at least part of the surface of the insulator is covered with a glaze layer, the glaze

layer contains 1 mol% or less of PbO, the glaze layer has a Vickers hardness Hv of 100 or more

[The spark plug as set forth in claim 1], and [wherein] the glaze layer contains at least one of phosphate ion, sulfate ion, fluoride ion and chloride ion.

6. (Amended) The spark plug as set forth in claim [1] 3, wherein the glaze layer further contains 0.5 to 5 mol% in total of at least one of [Ti, Zr and Hf in terms of] ZrO_2 , TiO_2 and HfO_2 .

7. (Amended) The spark plug as set forth in claim [1] 3, wherein the glaze layer further contains 0.5 to 5 mol% in total of at least one of [Mo, W, Ni, Co, Fe and Mn in terms of] MoO_3 , WO_3 , Ni_3O_4 , Co_3O_4 , Fe_2O_3 , and MnO_2 [, respectively].

8. (Amended) The spark plug as set forth in claim [1] 3, wherein the glaze layer shows an external appearance of 0 to 6 in chroma Cs and 7.5 to 10 in lightness Vs when observed in the state that the glaze is formed on the insulator.

9. (Amended) The spark plug as set forth in claim [1] 3, wherein the insulator is formed with a projection part in an outer circumferential direction at an axially central position thereof, taking, as a front side, a side directing toward the front end of the center electrode in the axial direction, a cylindrical face is shaped in the outer circumferential face at the base portion of the insulator main body in the neighborhood of a rear side opposite the projection part, and the outer circumferential face at the base portion is covered with the glaze layer formed with the film thickness ranging 10 to 50 μm .

Claims 10 and 11 have been newly added.